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Interview with Professor Peter Dobson, Academic Director of the Oxford University Begbroke Business and Science Park



Peter Dobson graduated from Southampton University in 1965 (BSc Honours degree in Physics) and 1968 (PhD in Physics). After a career as a lecturer in Physics at Imperial College and Senior Principal Scientist at Philips Research laboratories (1984-1988) he was appointed to a University Lectureship and College Fellowship at the Queen's College Oxford in 1988 and a Professorship in 1996.

In 1999 Prof. Dobson spun-off a company, now called **Oxonica plc**, that specializes in making nanoparticles for a wide range of applications, ranging from sunscreens to fuel additives and bio-labels. In 2000, with colleagues in Chemistry and Engineering, he spun-off **Oxford Biosensors Ltd** that makes a hand-held device based on enzyme-functionalized microelectrode arrays.

Prof. Dobson was appointed to his present position (Director of the Oxford University Begbroke Business and Science Park) in August 2002 and has the responsibility of setting up new research institutes that will combine University activities with company R&D, and leading a team that facilitates the rapid transfer of technology and knowledge. He consults widely and advises several corporate and national organizations on nanotechnology. In 2005 the Small Times Magazine named Professor Dobson **Innovator of the Year**.

Prof. Dobson's research interests are very broad, covering most aspects of nanotechnology including surface physics, preparation of nanoparticles, thin film growth and electron diffraction, electron beam lithography, physics and chemistry of quantum dots and embracing biotechnology, environmental technology and the whole innovation/exploitation process. For the 9 month of 2008 Prof. Dobson published 7 papers in such journals as Applied Physics Letters, Nanotechnology, Journal of Colloid and Interface Science.

Do you like your work as the Director of Begbroke Business and Science Park?

Oh, yes. I like it very much. I run the Science Park with a very small team. We've got 350 people working on the site. That is a mixture of companies' and university people. And I run the site with a very small team of 7 people. And they are all handpicked. And I'm still doing research myself.

So I like it. I think it is a perfect job.

And what is your research?

It's mainly in nanotechnology. It is linked strongly with areas like medicine and environmental clean-up and remediation.

You also have some publications and so on.

Oh, yes. I publish probably four or five scientific papers a year. I have not written much about the way we set up the site and about our Knowledge Transfer activities, but I do plan to do so soon.

What education, experience and qualities should have a person to run a science park? In Russia there are also some science parks to be developed. How could we find people to run the park in the better way?

I think you have to have somebody who has worked in industry and somebody who has worked in academic field. I think at first he/she has to have some sets of real practical experience. I am trying to find my replacement now. We are finding a shortage of people who have both academic and industrial experience and the people we train to undertake these "knowledge transfer" activities are in great demand.

In Russia people usually say that it is impossible to make businessman from researcher.

I think it is similar in Britain. When we start a company the first thing we do is look for the managing director, or the CEO. That usually takes about 3 to 6 months. They often do their first six months work free in return for having a percentage of the equity. And if we find the right person, it means that academic does not have to learn how to become businessman, he will work for himself. We don't usually encourage the academics to be CEOs. Very often a post-doc goes into the company to become the science/technology officer.

Were there any Russians who created companies in your Business and Science Park, who were trained and so on?

Yes, there are Russians. Several.

You've met Yury Zhuk. We did not train Yury. He arrived about the same time as I to Begbroke Science Park.

One of my Post Docs Oleg Salata set up a company called Opsys. It grew to about 20 people. And then the company was bought by Cambridge Display Technology. And Oleg left the company. He is still in Britain; he is still in this field. He is a researcher. He is looking now to start another company or to start with a growing company. There are now many Russian academics in Universities in the UK.

Do you feel sometimes like to found a new company or a couple of companies?

Yes, recently we nearly started x-ray microscope company, me and one of my researchers. I also get involved still with young people who want to set up in the venture capital business, and I have been helping them do that. So, I'm still keen on trying to help form companies of all sorts!

Do you have some special ways of collaboration between the Science Park and venture capital companies?

Yes. Two of the fastest growing companies in the Science Park are both founded by Oxford academics and funded by a venture capital group called IP group. This venture group was set up by a friend of mine David Norwood who used to be the British chess champion and captain. And I think that's why he is in venture capital!

Yes, chess players are often dealing with business and they do business well.

That's right.

Does the Science Park make any profit or do you just live on charities and government funding?

It's a mixture. The commercial part of the science park is actually making a profit because it is 100 percent fully occupied, and we have a waiting list of companies to come on the site. So we are able to charge a premium rate. It results in a profit. We have to be "not for profit", so we put the profit back into the organization to improve and enhance the site's facilities.

The university side of the science park does rely on government initiatives and handouts. We cross-subsidize some activities of the Science Park. So we use this to improve the restaurant, the meeting rooms, the facilities which helps both companies and university staff.

So, you are going to enlarge you Science Park because you have such a big waiting list of companies.

Oh, yes. In the next three years we plan to build nine thousand square meters of laboratory and office space. And we also have to build a new road for access to the site. There are so many people wishing to go to Begbroke. I have to find money for building a road which will probably come from a loan from the university.

What are the backgrounds of people who were trained by you? In your report you mentioned 17 people who were trained in the Science Park. What were their occupations before?

They were mainly research scientists. One had come to us from the computing industry. Another person was a university lecturer who was changing her subject, and her field. Another one had done an MBA. And he did not like the lack of experience that the MBA had and decided to get some real experience. But the rest of them were all PhD students or Post Docs.

So they were young and the average age ...

The average age is about twenty six.

A lot of prospects then. Promising young people.

Yes, all were very motivated too.

Do you have any special courses on nanotechnology which Russian researchers or business people can visit? I mean something like MBA but in nanotechnology, not general courses in nanotechnology or material science.

We don't do only nanotechnology. We run courses which cover all branches of technology. We tend to give people much more practical training than has been done with MBA. So, we train them in practical skills of presenting the case, writing the business plan, etc. So they get very practical advice. We are bringing CEOs and finance officers from the other sort of companies who recently have gone through the process to assist with mentoring. Their experiences are very useful.

Yes of course. Unfortunately, in Russia there seems to be no such education. Here there are just science and theoretical background in business.

But in Russia there is one more problem. When potential investors want to get some information about the project they usually face with an extraordinary information protection from inventors, start-ups, etc. Researchers don't want to provide information and usually don't understand that it is necessary to attract the funding. Is there the same problem in the Great Britain?

Yes, there are the same issues. We always face such difficulties. It's a very big problem because the researchers don't like to be told that their ideas are not special.

Are you still working in Oxonica, in the Board of Directors for example?

No, now I'm a consultant. I'm not on the board. That would be a conflict with my present job. Now I'm very busy. I'm running the Park and I'm in the advisory boards of 7 companies some of which are on the Science Park.

Are there any of Oxonica originators who are working in the company now?

A co-founder of Oxonica now also works for another company. He left Oxonica about 18 months ago. And he is working for another new Oxford spin-off company. He is leading that company in energy technology. There are one or two people who have been in Oxonica since the very early days. I guess we have four who were in Oxonica from the very beginning. The Chief Executive Kevin Matthews joined us when we had been running for about 18 months. He is still there. He is just becoming chairman of the Knowledge Transfer Network which I think will be working closely with Rosnano.

How many people are working in Oxonica now?

We have about 40 people. 23 of them are in the US, and 17 in Britain (these numbers are very approximate).

As far as I know Oxonica is going to enter the Russian market. Do they have any preliminary agreements assigned?

Yes they have. I can't tell you what the agreements are but they deal with diesel fuel additive materials. I expect they will probably recruit somebody who is Russian speaking very soon to help to develop this area.

What influence has the High Court decision on Envirox™ license on Oxonica activity?

This Judge's decision is very serious for Oxonica. I personally don't think Judge made the correct decision, and I expect the company might challenge it.

But I would suggest and I have suggested to the CEO that the best way is to get negotiations with Neuftec. I knew Mr. Hazarika quite well. And I think both companies could waste a lot of money on lawyers. I wish they come into an agreement quite quickly and then maybe produce products jointly. That would be my personal preferred solution and it does not represent the views of Oxonica.

I can see the situation from the Neuftec point of view. But all of the technical advances which contributed into Neuftec patents were performed in Oxonica by the staff of Oxonica.

So, I think the Judge was a little bit misguided. The best solution for two companies is to work together not to have all this law actions.

And do you have any advice to the Russian investors who want to invest into the high-tech?

Yes, be very careful that you are investing in something for which there is a market need. Don't invest into technology. Invest into a market need. And look into the team of people. And ask yourselves if the people are going to work together as a team.

This is probably not the answer you expected from scientist but my experience is teaching me that most important thing is to be sure that public want to buy a product, and that people making it are going to deliver.

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